Serial No.: 10/729,881 Docket No.: KC-19,203

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A low-density, open-cell, thermoplastic, absorbent foam, comprising:

a base resin, a surfactant, a plasticizing agent, and 10% to about 50% by weight of a thermoplastic elastomer;

wherein the foam has an open cell content of greater than 55% and a fluid intake flux of about 1 ml/sec/in^2 or greater upon a first insult, about 1 ml/sec/in^2 or greater upon a second insult, and about 1 ml/sec/in^2 or greater upon a third insult; and

the foam is soft and flexible, and has a compression resistance of about 20% compression set or less.

2. (Original) The foam of Claim 1, wherein the base resin comprises at least one of the group consisting of polystyrene, styrene copolymers, polyolefins, polyesters, and combinations thereof.

3. (Canceled)

4. (Canceled)

5. (Currently Amended) The foam of Claim 1, wherein the thermoplastic elastomer comprises at least one of the group consisting of styrenic block copolymers including diblock and triblock copolymers which may include styrene-isoprene-styrene (SIS), styrene-butadiene-styrene (SBS), styrene-isoprene-butadiene-styrene (SIBS), styrene-ethylene/butylene-styrene (SEBS), styrene-ethylene/propylene-styrene (SEPS); polyolefin-based thermoplastic elastomers including random block copolymers including ethylene α-olefin copolymers; block copolymers including hydrogenated butadiene-isoprene-butadiene block copolymers; stereoblock polypropylenes; ~~graft copolymers, including~~ ethylene-propylene-diene terpolymer (EPDM), ethylene-propylene random copolymers (EPM) and ethylene propylene rubbers (EPR); blends of thermoplastic elastomers with dynamic vulcanized elastomer-thermoplastic blends; thermoplastic polyether ester elastomers; ionomeric thermoplastic

elastomers; polyamide thermoplastic elastomers; thermoplastic polyurethanes; and combinations thereof.

6. (Previously Presented) The foam of Claim 1, wherein the thermoplastic elastomer has a diblock content between about 50% and about 80% of a total weight of the thermoplastic elastomer.

7. (Original) The foam of Claim 1, comprising between about 0.05% and about 10% surfactant, by weight, of the foam.

8. (Original) The foam of Claim 1, wherein the surfactant comprises a nonionic surfactant.

9. (Original) The foam of Claim 1, wherein the surfactant comprises a multi-component surfactant system

10. (Original) The foam of Claim 1, comprising between about 0.5% and about 10% plasticizing agent, by weight, of the foam.

11. (Original) The foam of Claim 1, wherein the plasticizing agent comprises at least one of the group consisting of polyethylene; ethylene vinyl acetate; mineral oil, palm oil, waxes, naphthalene oil, paraffin oil, acetyl tributyl citrate; acetyl triethyl citrate; p-tert-butylphenyl salicylate; butyl stearate; butylphthalyl butyl glycolate; dibutyl sebacate; di-(2-ethylhexyl) phthalate; diethyl phthalate; diisobutyl adipate; diisooctyl phthalate; diphenyl-2-ethylhexyl phosphate; epoxidized soybean oil; ethylphthalyl ethyl glycolate; glycerol monooleate; monoisopropyl citrate; mono-, di-, and tristearyl citrate; triacetin (glycerol triacetate); triethyl citrate; 3-(2-xenoyl)-1,2-epoxypropane; and combinations thereof.

12. (Original) The foam of Claim 3, wherein the thermoplastic elastomer also serves as the plasticizing agent.

13. (Original) The foam of Claim 1, wherein the foam has a density of about 0.1 g/cm^3 or less.

14. (Previously Presented) The foam of Claim 1, wherein the foam has an open-cell content of about 70% or greater.

15. (Original) The foam of Claim 1, wherein the foam surfactant permanence remains intact in the foam such that a supernatant resulting from soaking the foam in water for 24 hours has a surface tension of about 40 dynes/centimeter or greater.

16. (Canceled)

17. (Original) The foam of Claim 1, wherein the foam has a saturated capacity of about 3 grams/gram or greater, as measured under a 0.5 psi loading.

18. (Original) The foam of Claim 1, wherein the foam has a basis weight of about 400 grams per square meter or less.

19. (Original) The foam of Claim 1, wherein the foam has an overall bulk of about 6 millimeters or less.

20. (Original) The foam of Claim 1, wherein the foam has a cross-direction trap tear strength of about 300 grams or greater.

21. (Original) The foam of Claim 1, wherein the foam has a machine-direction trap tear strength of about 300 grams or greater.

22. (Original) The foam of Claim 1, wherein the foam has a Gurley stiffness of about 600 milligrams or less.

23. (Original) The foam of Claim 1, wherein the foam has an edge compression of about 250 grams or less.

24. (Original) The foam of Claim 1, wherein the foam has a compression resistance of about 20% compression set or less.

25. (Original) The foam of Claim 1, wherein the foam has a vertical wicking height of about 5 cm or greater.

26. (Original) The foam of Claim 1, wherein the foam has a viscous fluid saturation capacity of about 3 g/g or greater and retention capacity of about 1 g/g or greater.

27. (Original) An absorbent article comprising the foam of Claim 1.

28. (Currently Amended) A soft, flexible, resilient, elastic, low-density, open-cell, thermoplastic, absorbent foam, comprising:

a base resin, 10% to about 50% by weight of a thermoplastic elastomer, and a surfactant;

wherein the foam has an open cell content of greater than 55% and a fluid intake flux of about 1 ml/sec/in^2 or greater upon a first insult, about 1 ml/sec/in^2 or greater upon a second insult, and about 1 ml/sec/in^2 or greater upon a third insult; and

the foam is soft and flexible, and has a compression resistance of about 20% compression set or less.

29. (Original) The foam of Claim 28, wherein the base resin comprises at least one of the group consisting of polystyrene, styrene copolymers, polyolefins, polyesters, and combinations thereof.

30. (Original) The foam of Claim 28, wherein the thermoplastic elastomer comprises a styrenic block copolymer including at least one of the group consisting of styrene-isoprene-styrene (SIS), styrene-butadiene-styrene (SBS), styrene-isoprene-butadiene-styrene (SIBS), styrene-ethylene/butylene-styrene (SEBS), styrene-ethylene/propylene-styrene (SEPS), and combinations thereof.

31. (Original) The foam of Claim 28, wherein the thermoplastic elastomer has a diblock content between about 50% and about 80% of a total weight of the thermoplastic elastomer.

32. (Original) The foam of Claim 28, wherein the surfactant comprises a multi-component surfactant system

33. (Previously Presented) The foam of Claim 28, comprising between about 50% and about 90% base resin, by weight, of the foam.

34. (Canceled)

35. (Original) The foam of Claim 28, comprising between about 0.1% and about 5% surfactant, by weight, of the foam.

36. (Previously Presented) The foam of Claim 28, wherein the foam has a density of about 0.1 g/cm^3 or less, a Gurley stiffness of about 300 milligrams or less, and an edge compression of about 35 grams or less.

37. (Original) An absorbent article comprising the foam of Claim 28.

38. (Previously Presented) A soft, flexible, resilient, elastic, low-density, open-cell, thermoplastic, absorbent foam, comprising:

between about 50% and 90% by weight, of a polystyrene base resin and between 10% and about 50%, by weight, of a thermoplastic elastomer, wherein the thermoplastic elastomer has a styrenic block copolymer thermoplastic elastomer diblock content between about 50% and about 80% of a total weight of the thermoplastic elastomer;

wherein the foam has an open cell content of greater than 55% and a fluid intake flux of about 1 ml/sec/in^2 or greater upon a first insult, about 1 ml/sec/in^2 or greater upon a second insult, and about 1 ml/sec/in^2 or greater upon a third insult; and

the foam is soft and flexible, and has a compression resistance of about 20% compression set or less.

39. (Currently Amended) A method for producing a low-density, open-cell, thermoplastic, flexible, soft, absorbent foam, comprising the steps of:

providing a foam polymer formula including a base resin, a plasticizing agent, a surfactant and 10% to about 50% by weight of a thermoplastic elastomer;

heating the foam polymer formula to create a polymer melt utilizing a blowing agent;

foaming the polymer melt to a density of about 0.1 g/cm^3 or less; and

extruding the polymer melt to form an open-cell, soft, flexible, thermoplastic, absorbent foam;

wherein the foam has an open cell content of greater than 55% and a fluid intake flux of about 1 ml/sec/in^2 or greater upon a first insult, about 1 ml/sec/in^2 or greater upon a second insult, and about 1 ml/sec/in^2 or greater upon a third insult; and

the foam is soft and flexible, and has a compression resistance of about 20% compression set or less.